FIG. 1

THE PRACTICE OF SURGICAL PATHOLOGY
Conventional Pathway From Surgery to Tissue Diagnosis

DAY 1

Surgery → "grossing" → batching of specimens → batched specimens input into processor → overnight processing

DAY 2

Batched specimens output from processor → block → microtomy → H&E stain → diagnosis

INTERVAL OF TIME FROM SURGERY TO DIAGNOSIS:>22 HOURS

FIG. 2

THE PRACTICE OF SURGICAL PATHOLOGY

Continuous Throughput Method-Pathway From Surgery to Tissue Diagnosis

DAY 1

Surgery → "grossing" → continuous every 15 min specimens input into 45 min processing system → continuous every 15 min output of specimens from system → block → microtomy → H&E stain → diagnosis

INTERVAL OF TIME FROM SURGERY TO DIAGNOSIS:<2 HOURS

FIG. 3

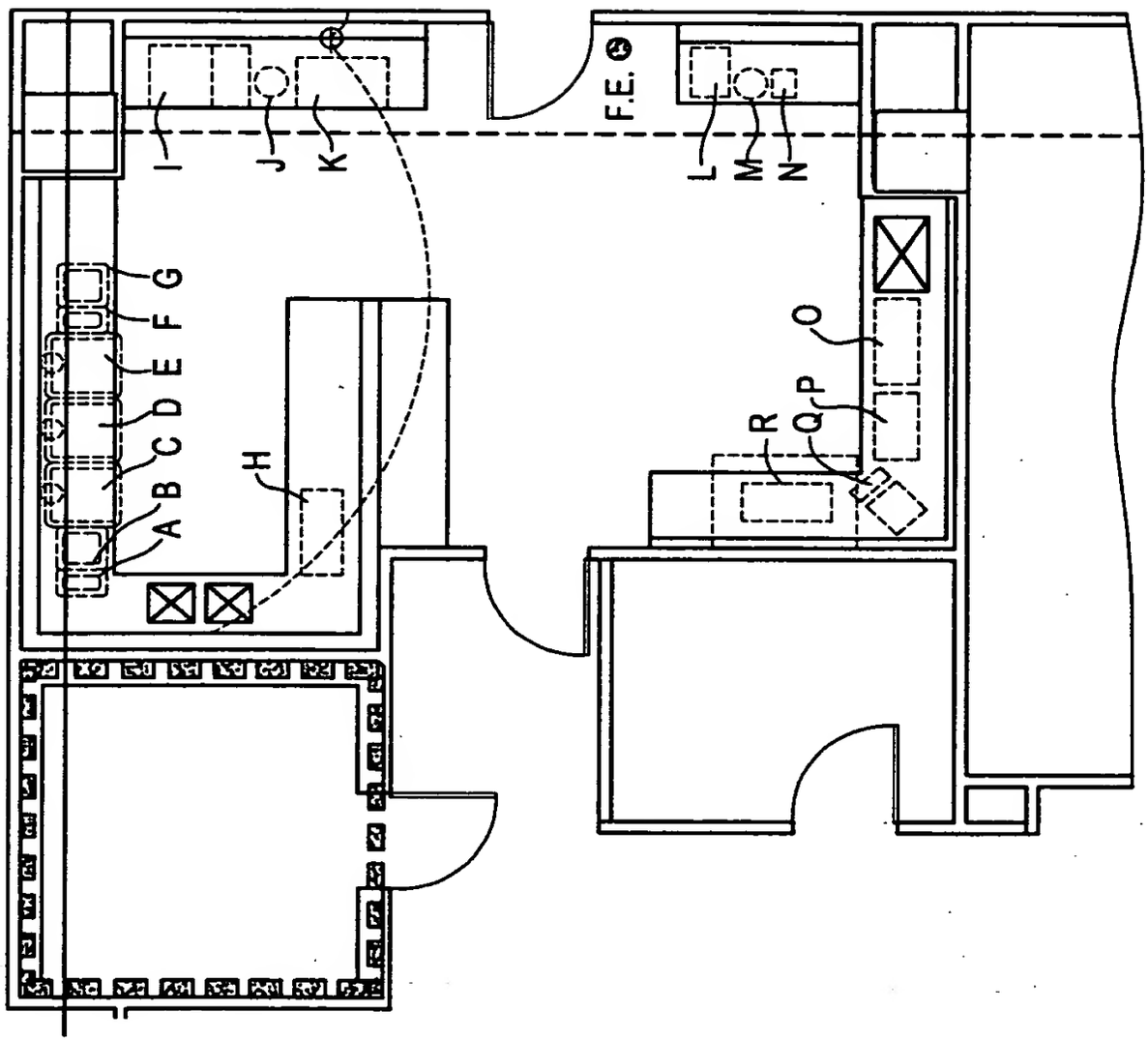

FIG. 4

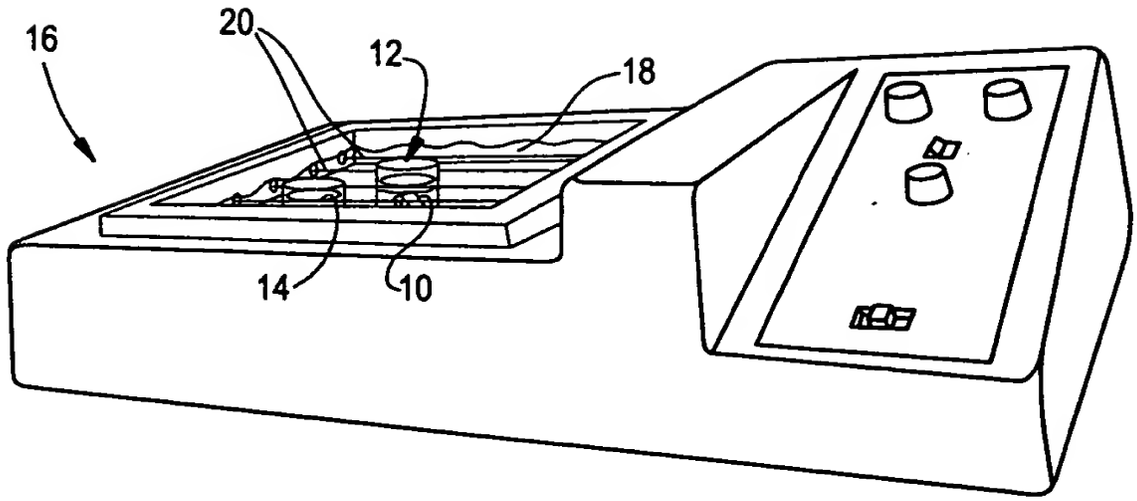

FIG. 5

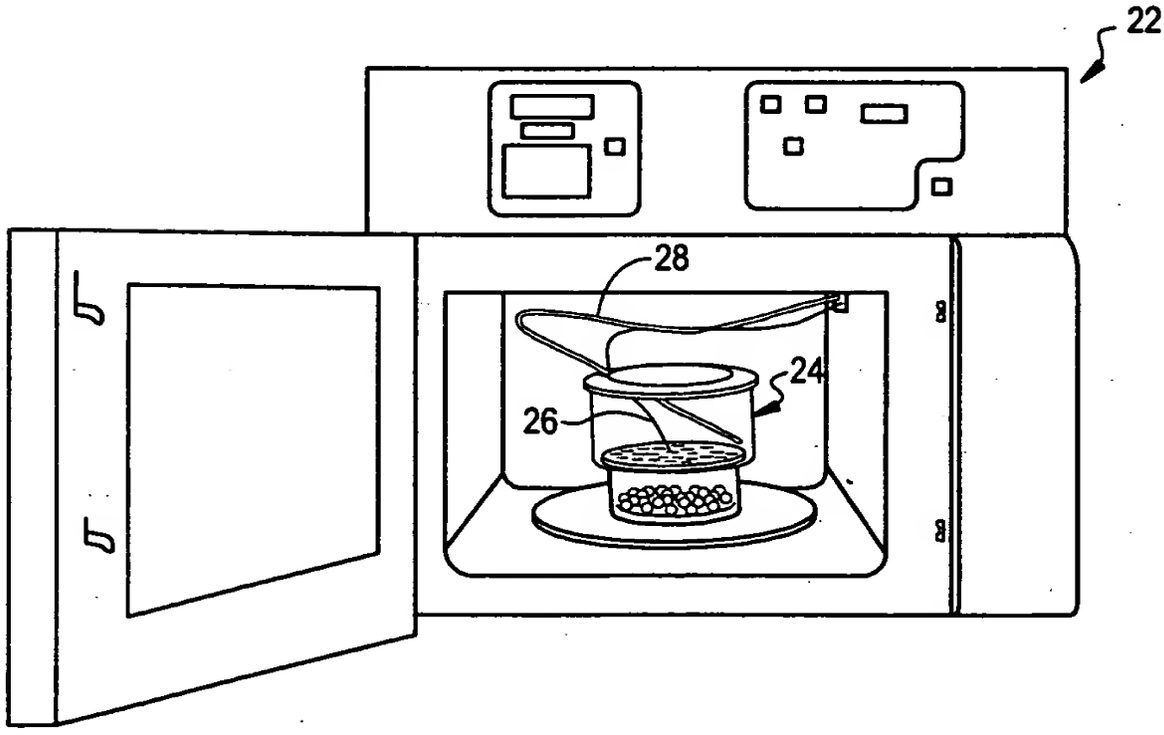

FIG. 6

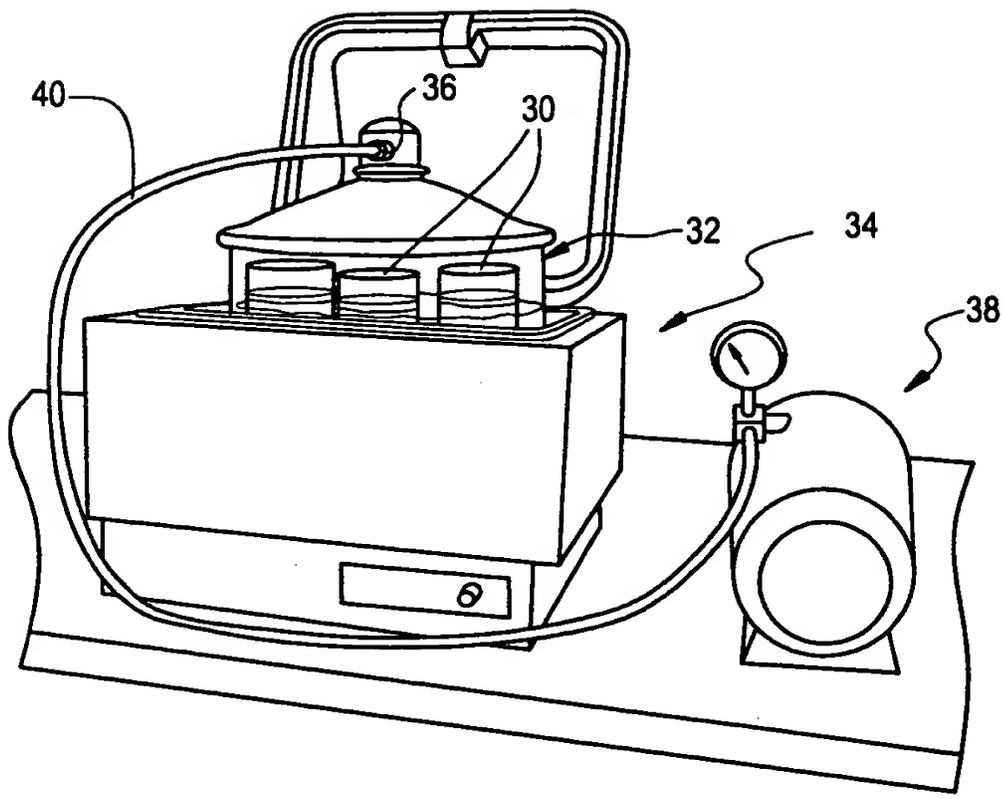

FIG. 7

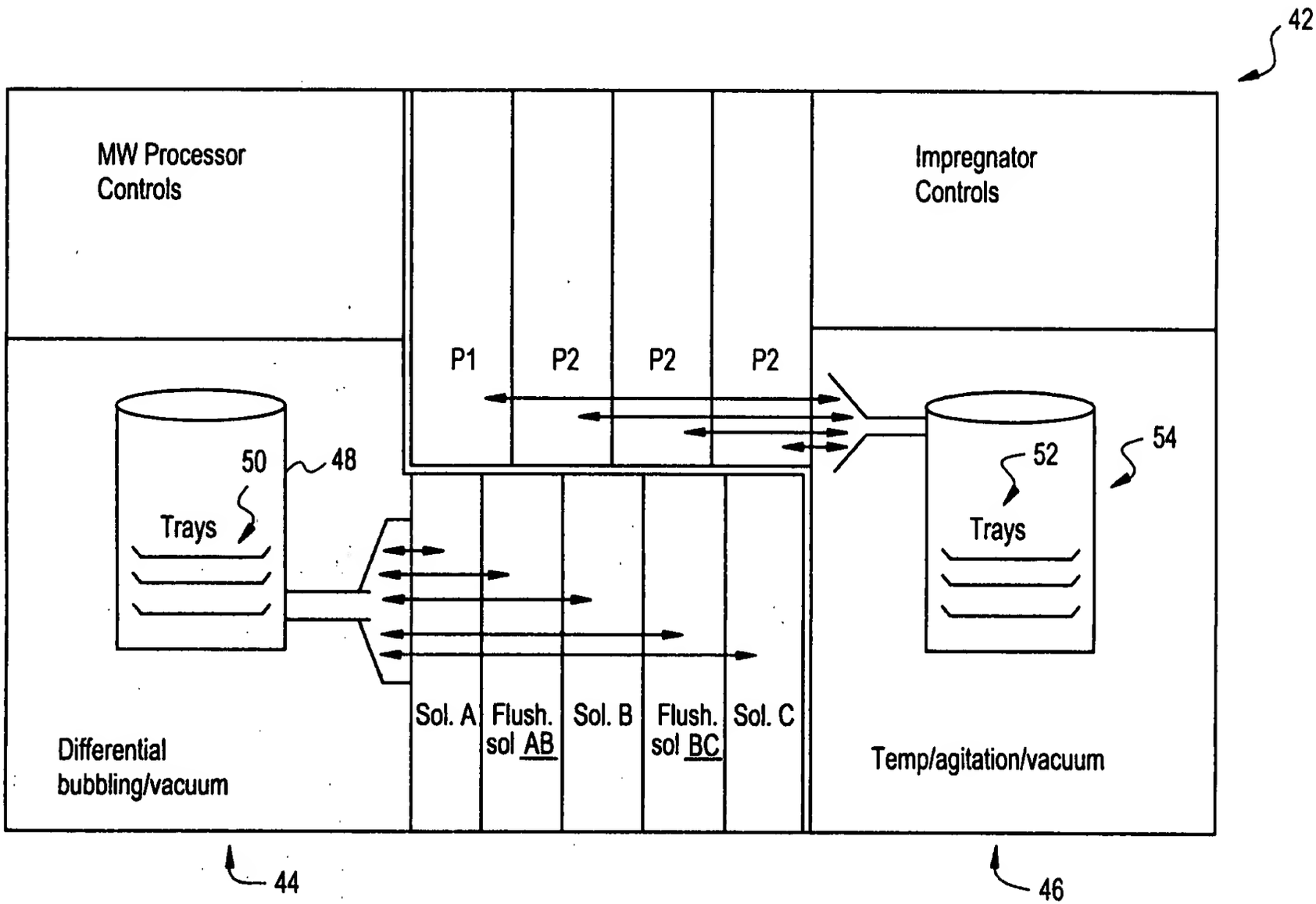

Fig 8 A

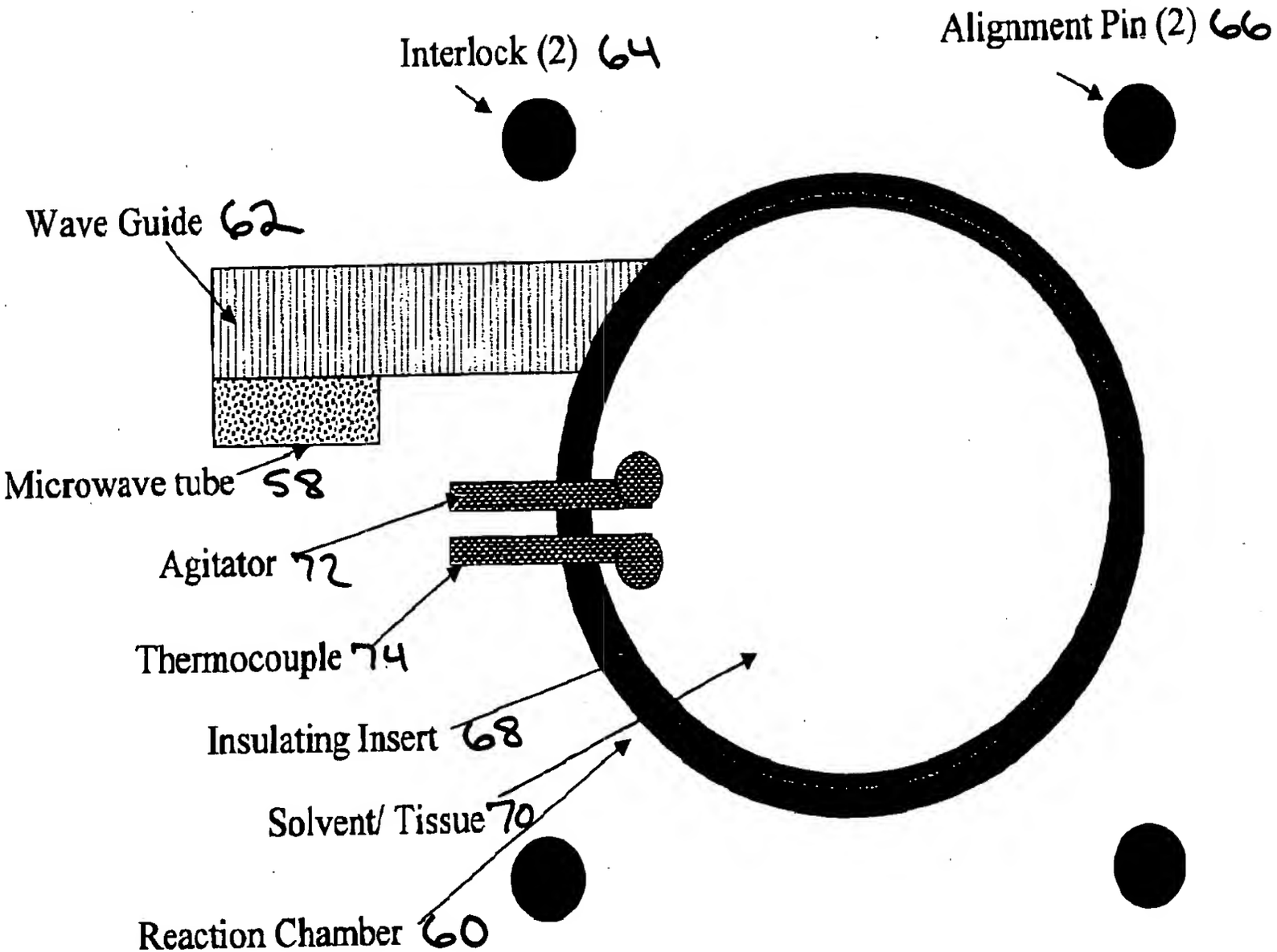

Fig 8 B

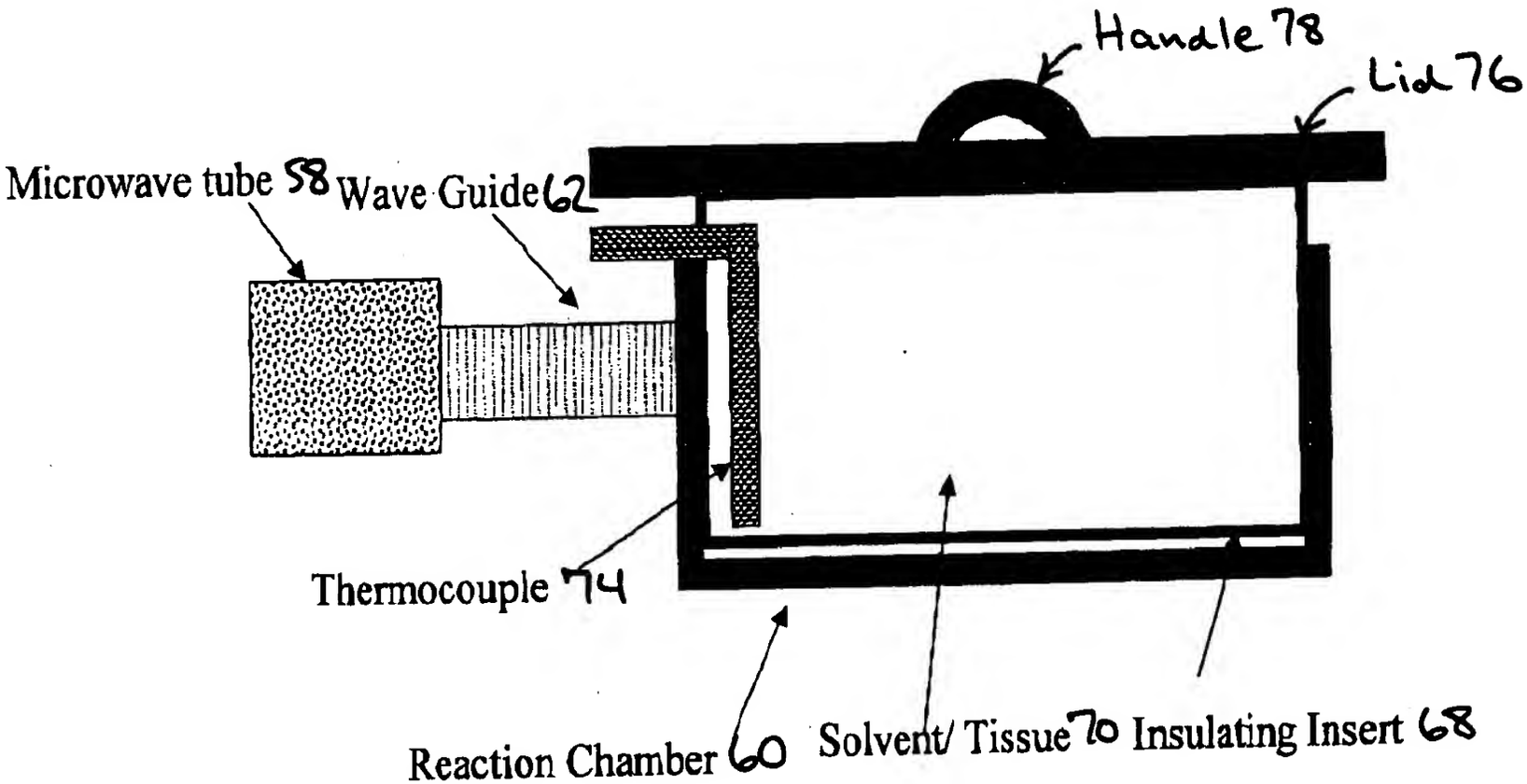
Handle 78
Lid 76
Microwave tube 58
Wave Guide 62
Thermocouple 74
Reaction Chamber 60
Solvent/ Tissue 70
Insulating Insert 68

Fig 8 C

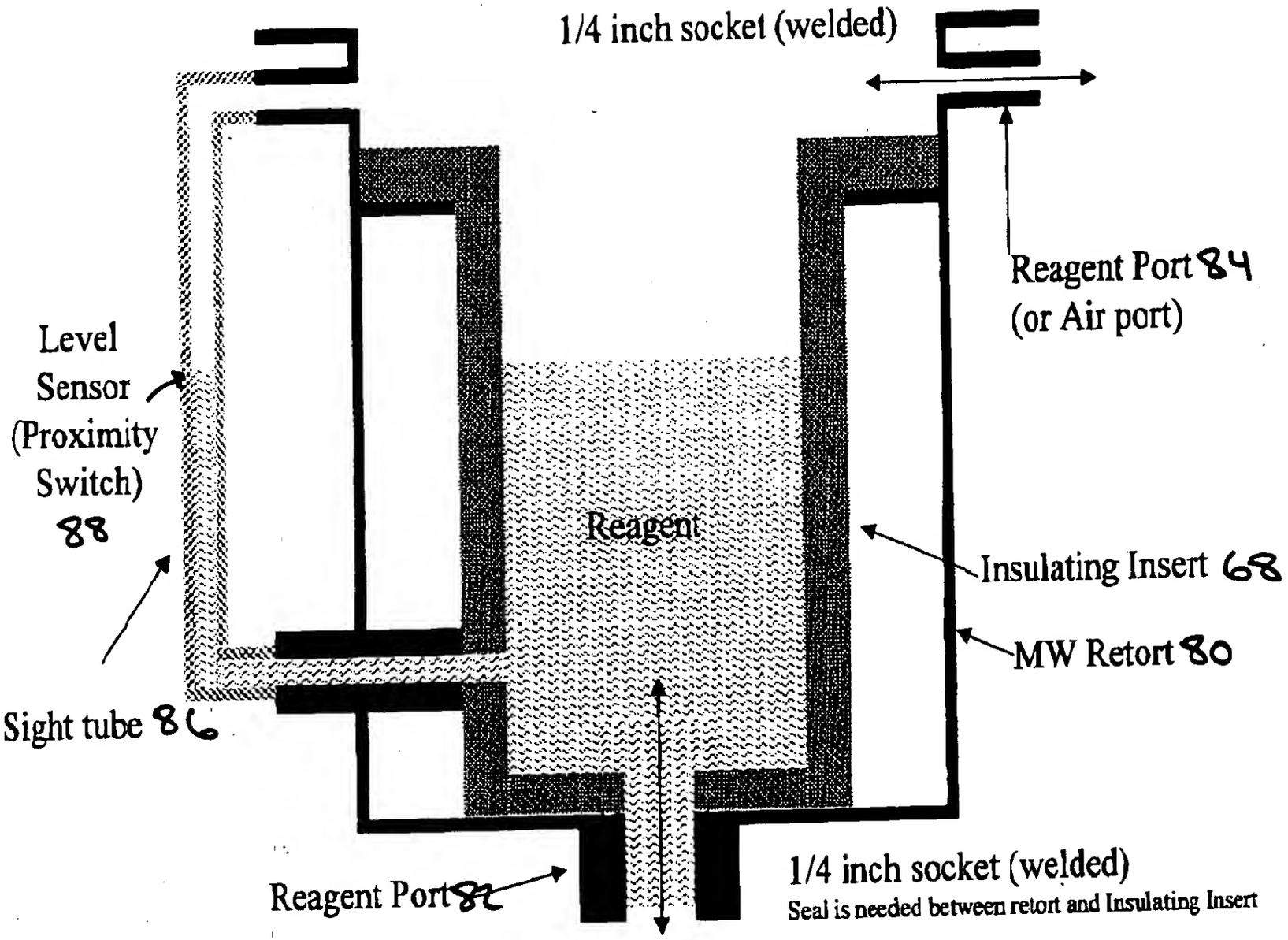
1/4 inch socket (welded)
Reagent Port 84
(or Air port)
Level
Sensor
(Proximity
Switch)
88
Reagent
Insulating Insert 68
MW Retort 80
Sight tube 86
Reagent Port 82
1/4 inch socket (welded)
Seal is needed between retort and Insulating Insert

Fig 9

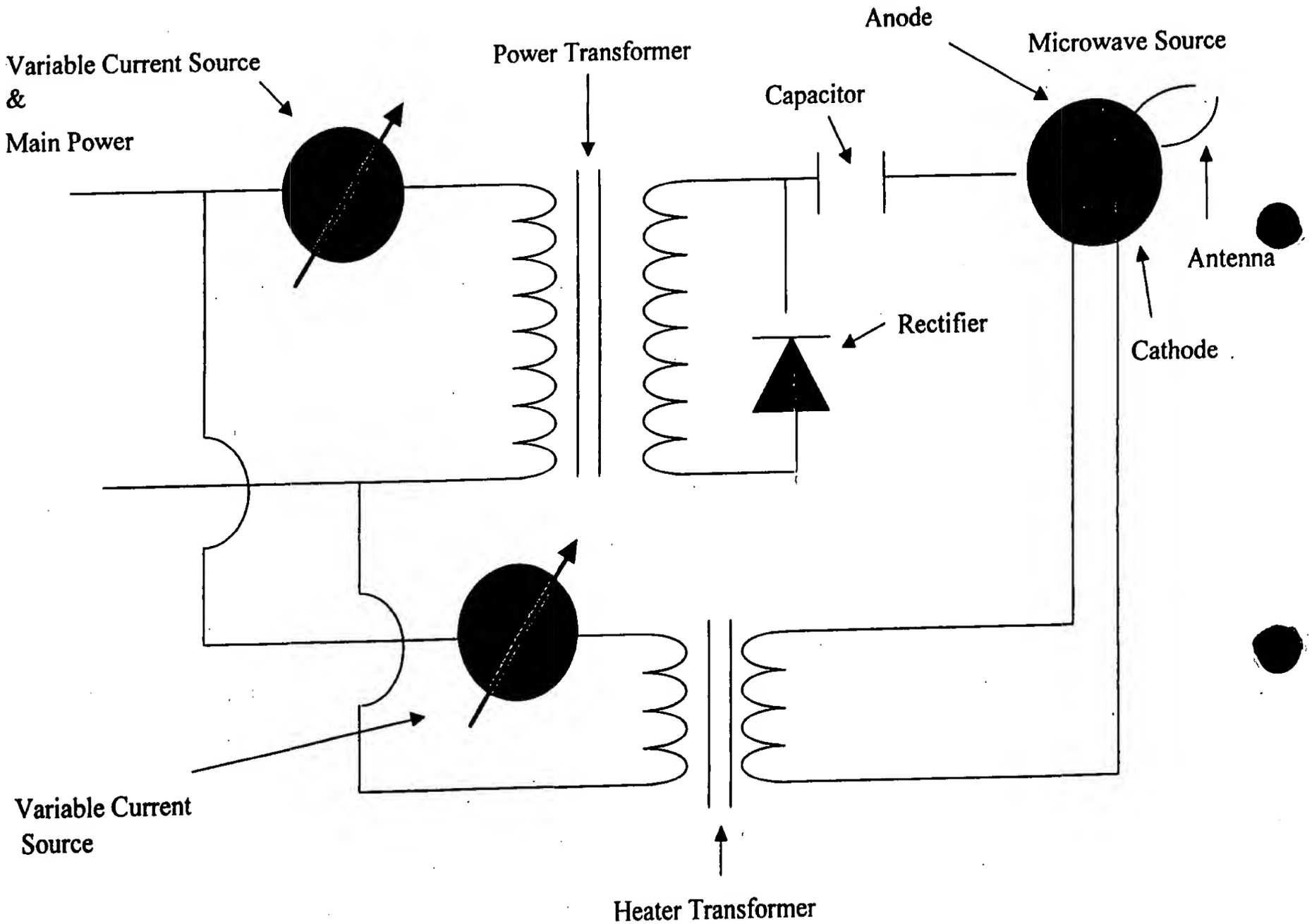
Variable Current Source
&
Main Power
Power Transformer
Anode
Microwave Source
Capacitor
Antenna
Rectifier
Cathode
Variable Current
Source
Heater Transformer

Fig 10

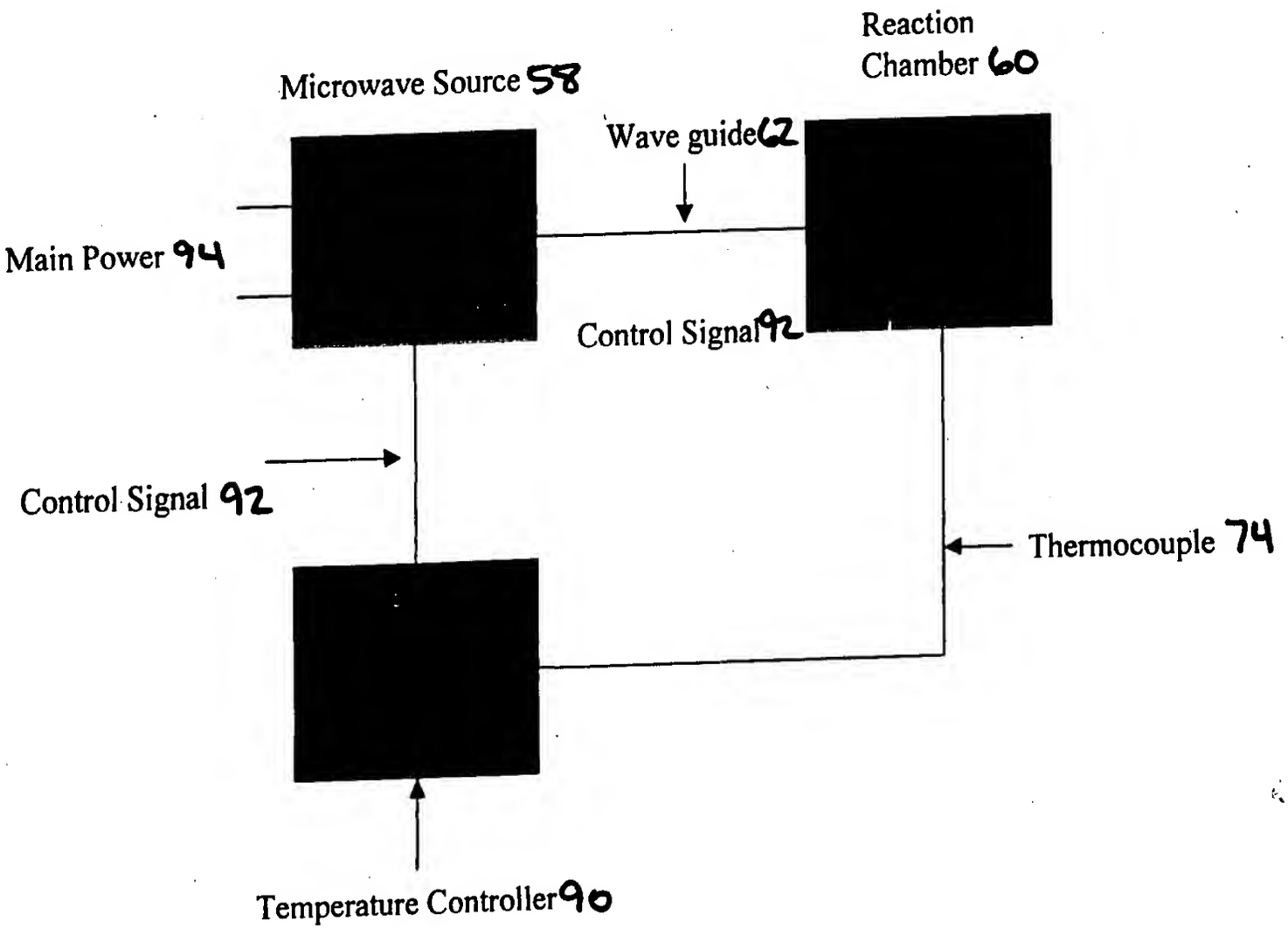
Reaction Chamber 60
Microwave Source 58
Wave guide 62
Main Power 94
Control Signal 92
Control Signal 92
Thermocouple 74
Temperature Controller 90

Fig 11
Impregnation Station

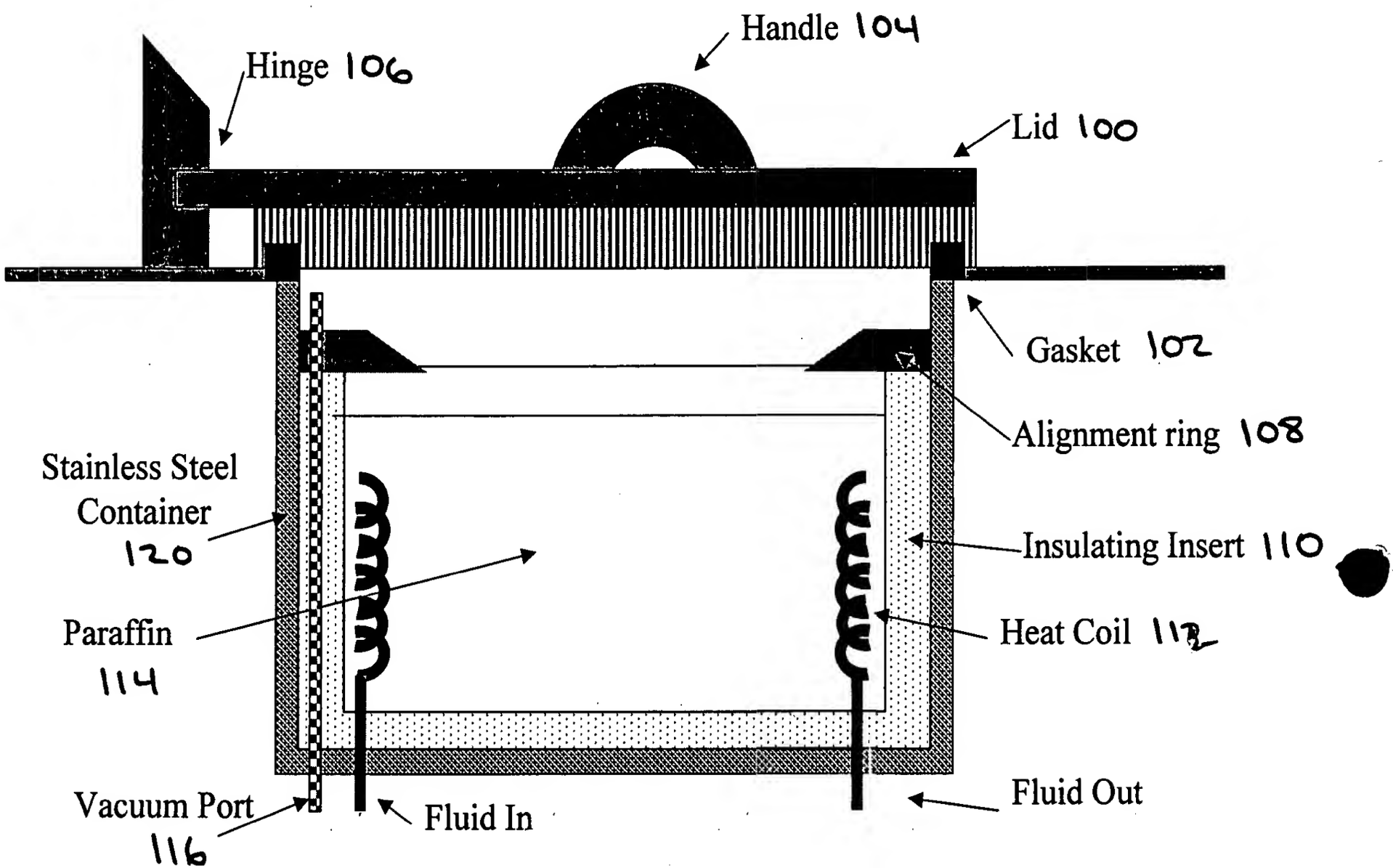

Fig 12

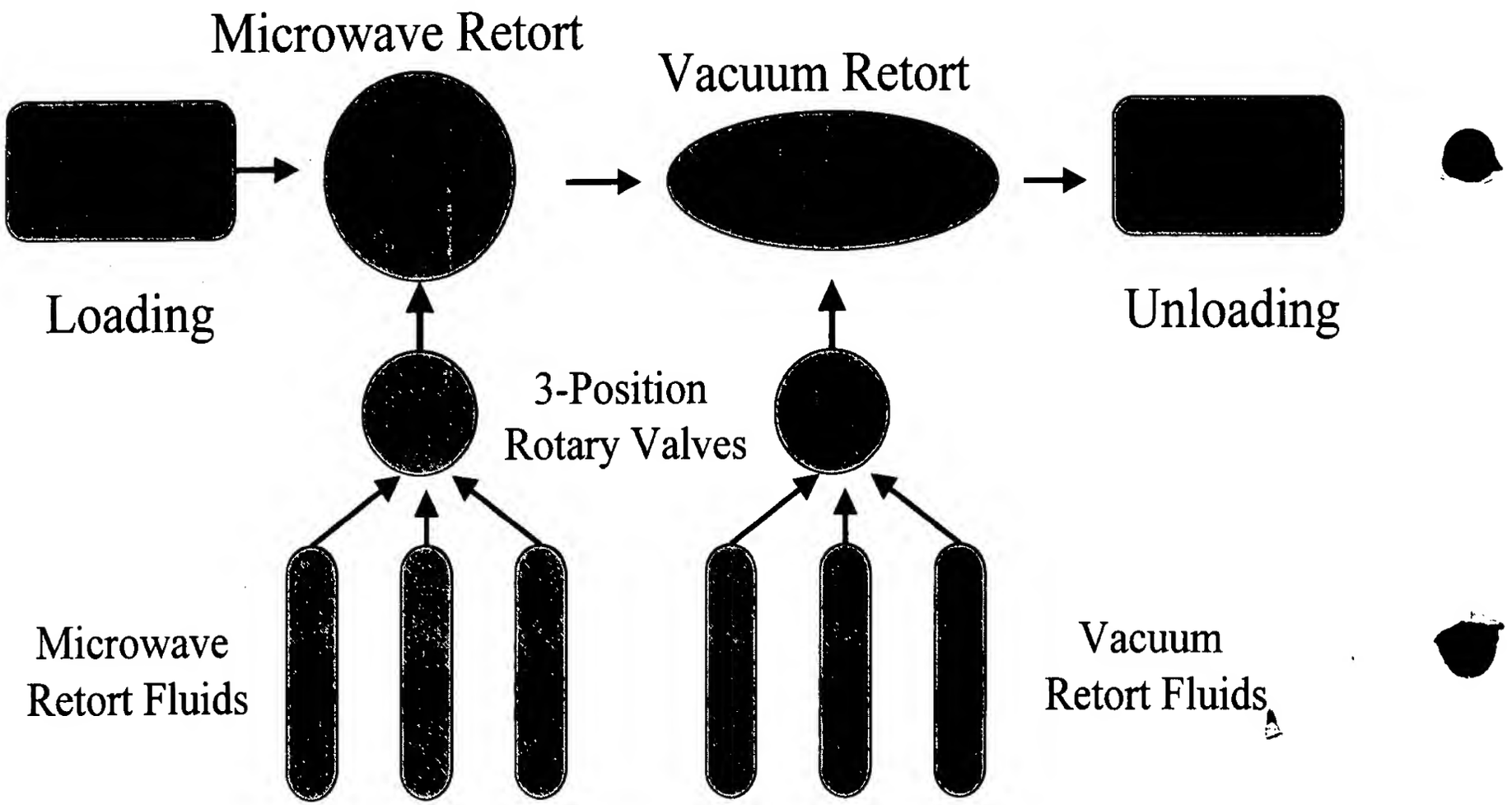
Microwave Retort
Vacuum Retort
Loading
Unloading
3-Position
Rotary Valves
Microwave
Retort Fluids
Vacuum
Retort Fluids

Fig 13